

Phosphorous acid and its ammonium, sodium, and potassium salts (076002) Mono- and di-potassium salts of phosphorous acid (076416) Fact Sheet

Summary

The ammonium, potassium, and sodium salts of phosphorous acid are used primarily for controlling downy mildew and brown rot, harmful fungi that attack a variety of food and non-food crops. In addition to controlling the fungi directly, these active ingredients appear to enhance the plant's natural defense mechanisms. No harm to humans or the environment is expected when users follow label directions.

I. Description of the Active Ingredient

Name of Active Ingredient: Mono- and di-potassium salts of phosphorous acid
OPP Chemical Code: 076416 [CAS # 13977-65-6 (mono-K); 13492-26-7 (di-K)]

Name of Active Ingredient: Phosphorous acid and its ammonium, sodium, and potassium salts
OPP Chemical Code: 76002

Phosphorous acid and its salts are not found naturally, but are closely related to common substances that are found throughout the environment. The active ingredients are directly toxic to the target fungi, and also appear to increase the effectiveness of the plants' defense mechanisms.

II. Use Sites, Target Pests, and Application Methods

- **Use sites:** Many food and non-food crops, including turf, ornamentals, trees. Can be used outdoors and indoors, e.g., nurseries, greenhouses, parks, golf courses).
- **Target pests:** Various fungi including Phytophthora and Pythium
- **Application methods:** Products are applied before any disease develops, and at subsequent intervals of 2 to 3 weeks. Can be applied by spraying leaves, using sprinkler irrigation systems, direct addition to soil, and dipping roots for transplant.

III. Assessing Risks to Human Health

Whether or not a substance poses a risk to humans or other organisms depends on two factors: how toxic the substance is, and how much of it an organism is exposed to. Therefore, the EPA considers both toxicity and exposure data in determining whether to approve a pesticide for use

Based on tests with animals, these chemicals are not expected to harm humans. The substances have been used in Australia and other countries for more than ten years with no indication of adverse effects.

IV. Assessing Risks to the Environment

Studies show that the active ingredients are not harmful to most non-target organisms, but are somewhat toxic to fish and aquatic invertebrates. To protect aquatic species, product labels instruct users not to apply the pesticide product to water and not to contaminate water during disposal.

V. Regulatory Information

Products with these active ingredients were registered (licensed for sale) in November 1997 (OPP ID # 76416), and in October 2000 (OPP ID # 76002). In April 2001, there were three registered end-use products containing salts of phosphorous acid as active ingredients.

VI. Producer Information

Three companies have registered products containing the above active ingredients.

VII. Additional Contact Information

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